

Connah's Quay Low Carbon Power

Preliminary Environmental Information Report
Volume II, Chapter 1: Introduction

Uniper

The Planning Act 2008
The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017
PINS Reference: EN010166
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1. Introduction

1.1 Overview

1.1.1 This Preliminary Environmental Information Report (PEIR) has been commissioned by Uniper UK Limited (hereafter referred to as the 'Applicant') to support an application ('the Application') to be made to the Secretary of State (SoS) for the Department for Energy Security and Net Zero (DESNZ). The Applicant is seeking a Development Consent Order (DCO) for the construction, operation and maintenance of a proposed low carbon Combined Cycle Gas Turbine (CCGT) Generating Plant fitted with Carbon Capture Plant (CCP) on land at, and in the vicinity of, the existing Connah's Quay Power Station (Kelsterton Road, Connah's Quay, Flintshire, CH6 5SJ), North Wales.

1.1.2 This PEIR presents:

- a description of the Proposed Development;
- the likely significant environmental effects of its construction, operation and decommissioning based on the Preliminary Environmental Information (PEI) available at the time of writing;
- measures to avoid or reduce such effects; and
- alternatives considered.

1.1.3 The PEIR is provided to support consultees in developing an informed view of the likely significant environmental effects of the Proposed Development. The Applicant will consider feedback on the PEIR and opportunities for the design of the Proposed Development and the Environmental Impact Assessment (EIA) to take into consideration any comments received through this consultation.

1.1.4 The Proposed Development Site (hereafter referred to as the 'Site') and its surroundings are described in **Chapter 3: Description of the Existing Environment (PEIR Volume II)** and the Proposed Development is described in **Chapter 4: The Proposed Development (PEIR Volume II)**.

1.1.5 The boundary of the Site is referred to as the 'Site Boundary' or 'Indicative Site Boundary'. Where used in reference to distances or locations, the terms 'Site', 'Site Boundary', and 'Indicative Site Boundary' are used interchangeably through this PEIR and should be read with the same meaning. The term 'Main Site' is not interchangeable with these terms as it is a specific area of the Site.

1.1.6 This chapter is supported by the following figure in PEIR Volume III:

- **Figure 1-1: Site Location Plan.**

1.1.7 This chapter is also supported by the following appendices in PEIR Volume IV:

- **Appendix 1-A: Scoping Report;**
- **Appendix 1-B: Scoping Opinion;** and
- **Appendix 1-C: Statement of Competence.**

1.2 The Applicant

- 1.2.1 The Applicant is a UK-based company, wholly owned by Uniper SE (Uniper) through Uniper Holding GmbH. Uniper is an international energy company that operates roughly 22.5 gigawatt (GW) of generation capacity in Europe. Uniper has activities in more than 40 countries and roughly 7,000 employees worldwide. In the UK, Uniper owns and operates a flexible generation portfolio of seven power stations, a fast-cycle gas storage facility and two high pressure gas pipelines, from Theddlethorpe to Killingholme and from Blyborough to Cottam.
- 1.2.2 Uniper is committed to investing more than €8 billion (~£6.9 billion) in growth and transformation projects between 2023 and 2030. This includes developing new renewables projects, investing in clean gases such as hydrogen, and new low or zero carbon power plants and by progressively transforming Uniper's existing fleet into Europe's leading source of zero-carbon power. Uniper intends to be completely carbon-neutral by 2040 and aims for its installed power generating capacity to be more than 80% zero-carbon by 2030.

1.3 What is Carbon Capture and Storage?

- 1.3.1 Carbon capture and storage (CCS), also referred to as carbon capture, usage, and storage (CCUS), is a low carbon technology which captures carbon dioxide (CO₂) emissions from industrial facilities such as power generation, iron and steel, fertiliser production, cement, chemicals and refining and transports it by either pipeline or ship for utilisation or safe and permanent underground storage, preventing it from entering the atmosphere.
- 1.3.2 Possible storage sites for carbon emissions include saline aquifers or depleted oil and gas reservoirs, which typically need to be 1 km (0.62 miles) or more below the ground where greater pressures exist (Ref 1-6).

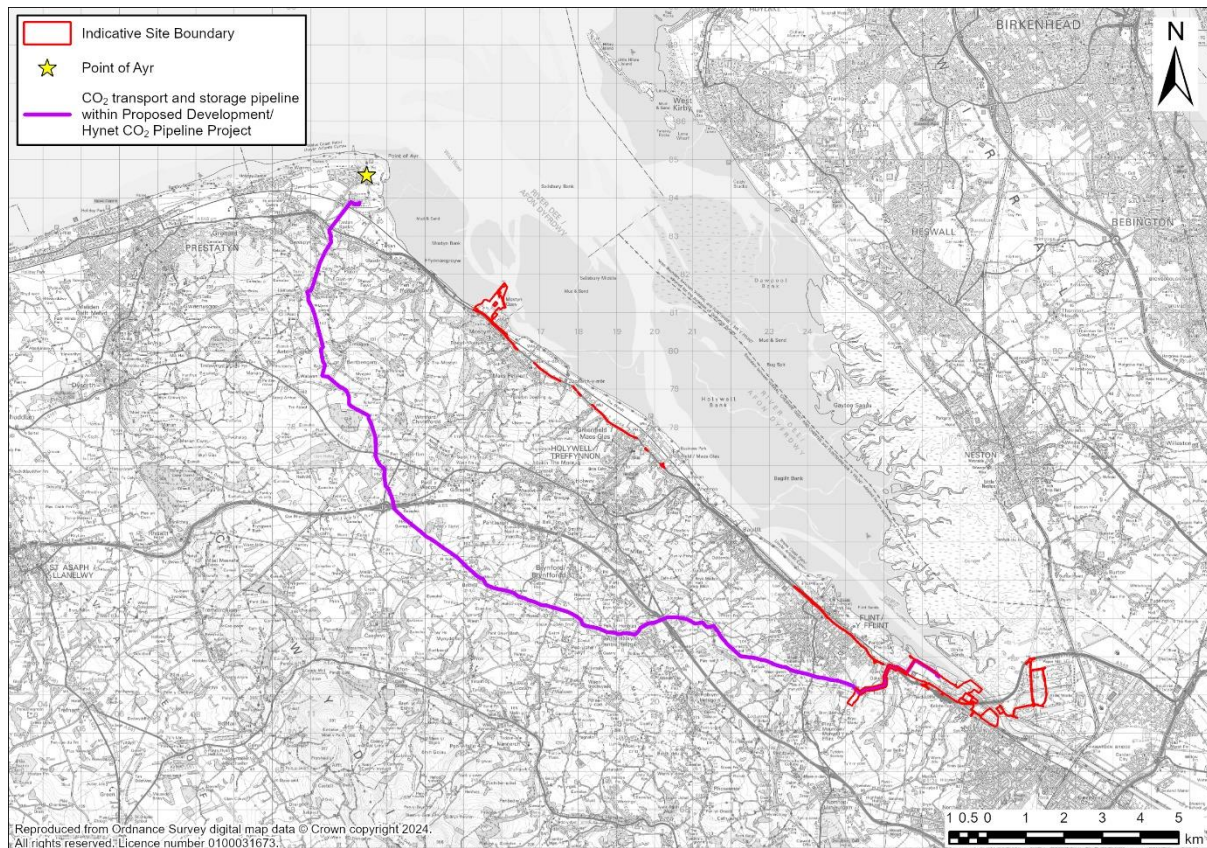
1.4 The Proposed Development

- 1.4.1 The design of the Proposed Development is subject to ongoing technical studies, to provide flexibility and to align with the current grid connection, but it is expected to comprise the development of up to two CCGT units achieving a net electrical output capacity of up to 1,380 megawatts (MW; referred to as MWe for electrical output) (with CCP operational) onto the national electricity transmission network.
- 1.4.2 It is expected that the Proposed Development will make use of CO₂ transport and storage networks owned and operated by Liverpool Bay CCS Limited, currently under development as part of the HyNet Carbon Dioxide Pipeline project (Ref 1-1) (referred to as the 'HyNet CO₂ Pipeline Project'), which will transport CO₂ captured from existing and new industries in North Wales and North-West England, as well as from new hydrogen production facilities that are proposed as part of HyNet North West Project. The captured CO₂ will be stored in depleted offshore gas reservoirs in Liverpool Bay.
- 1.4.3 Given the proximity to the HyNet CO₂ Pipeline Project, the Applicant's preferred option is for transport via a CO₂ pipeline that connects the Proposed

Development to the HyNet CO₂ Pipeline Project that received development consent in March 2024, and the assessment is carried out on this basis. However, other delivery partners could be considered for the transport of the CO₂.

1.4.4 The Applicant is fully committed to building a decarbonised generating station. The Applicant will be responsible for the construction, operation (including maintenance) and decommissioning of the Proposed Development, including equipment required on-site for the capture of CO₂ emissions from the generating station. Liverpool Bay CCS Ltd (or any identified successor organisation) will be responsible for the construction and operation (including maintenance) of the CO₂ transport and storage pipeline that forms part of the Proposed Development and for the construction and operation (including maintenance) of the HyNet CO₂ Pipeline Project downstream of the Proposed Development, and which is not part of the Proposed Development. It is expected that this downstream transport and storage network will be operational prior to the operation of the Proposed Development. **Plate 1-1** illustrates the location of the Proposed Development in relation to the downstream HyNet CO₂ Pipeline Project which terminates at the Point of Ayr Gas Terminal.

Plate 1-1: Proposed Development Interface with HyNet CO₂ Pipeline Project



1.4.5 Uniper will continue to be responsible for the operation (including maintenance) of the existing natural gas transmission pipeline immediately upstream of the Proposed Development from the existing Burton Point above ground installation.

1.4.6 For the purposes of the electrical connection, National Grid Electricity Transmission (NGET), which builds and maintains the electricity transmission

networks, is responsible for the operation and maintenance of the existing 400 kV NGET Substation and their equipment. Uniper will be responsible for the operation and maintenance of all on-site electrical plant and apparatus over the life of the Proposed Development.

- 1.4.7 A description of the Proposed Development is set out in **Chapter 4 (PEIR Volume II)**. At this stage in the development, the design of the Proposed Development incorporates a necessary degree of flexibility, to allow for the future selection of a preferred technology in the light of prevailing policy and market considerations once a DCO is granted. This is determined by various technical and economic considerations and will be influenced by further UK Government policy, as detailed in **Chapter 7: Planning Policy and Need**.

1.5 The Development Consent Process

- 1.5.1 The Proposed Development falls within the definition of a 'nationally significant infrastructure project' (NSIP) under Section 14(1)(a), 15(1) and 15(3A) of the Planning Act 2008 (the '2008 Act') (Ref 1-2) as a generating station in Wales with a capacity of more than 350 MW.
- 1.5.2 As an NSIP project, the Applicant is required to seek a DCO to construct and operate the Proposed Development, under Section 31 of the 2008 Act. Section 37 of the 2008 Act also governs the form, content and accompanying documents that are required as part of a DCO application. The requirements are implemented through The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (Ref 1-3) (hereafter referred to as the 'APFP Regulations') which state that an application must be accompanied by an ES, where a development is considered to be 'EIA development' under The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (Ref 1-4) ('the EIA Regulations').
- 1.5.3 The Application will be submitted to the Planning Inspectorate (PINS) who will examine the Application and make recommendations to the SoS for the DESNZ pursuant to the 2008 Act, who will subsequently determine whether or not a DCO should be granted for the Proposed Development.

1.6 Environmental Impact Assessment and the Purpose of the Preliminary Environmental Information Report

- 1.6.1 Regulation 3(1) of the EIA Regulations defines the meaning of 'EIA development' (with reference to Schedules 1 and 2 to the EIA Regulations). Schedule 1 to the EIA Regulations, which describes developments for which an EIA is necessary, includes "*thermal power stations, and other combustion installations, with a heat output of 300 megawatts or more.*" EIA is compulsory for Schedule 1 developments given the type and/or the scale of the development is likely to have the potential for significant effects on the environment.
- 1.6.2 Given its capacity and the nature of the proposed activities, the Proposed Development will therefore be an 'EIA development' and as such, the Applicant has notified the SoS in writing under Regulation 8(1)(b) of the EIA

Regulations that it intends to provide an ES in respect of the Proposed Development. The Proposed Development is therefore 'EIA development' for the purposes of the EIA Regulations and an ES will form part of the Proposed Application.

The EIA Scoping Process

- 1.6.3 The purpose of the EIA Scoping process is to provide a framework for identifying the potential environmental impacts arising from the Proposed Development, establishing the likely significant environmental effects and distinguishing the priority issues to be addressed within the ES. An EIA Scoping Report and a request for an EIA Scoping Opinion pursuant to Regulation 10 ('Application for scoping opinion') of the EIA Regulations was submitted to PINS on 8 February 2024.
- 1.6.4 The EIA Scoping Report (**Appendix 1-A PEIR Volume IV**) was developed in reference to standard guidance and industry practice and was informed by the EIA team's experience of working on a number of similar projects.
- 1.6.5 The EIA Scoping Report sets out:
- details of the Proposed Development and the Site;
 - a summary of alternatives considered;
 - a summary of existing and future baseline conditions;
 - an outline of the likely environmental effects of the Proposed Development;
 - a description of the matters to be scoped in and out of the EIA;
 - proposed assessment methods; and
 - the proposed structure of the ES.
- 1.6.6 The SoS's Scoping Opinion was received by the Applicant on 20 March 2024 and is presented within **Appendix 1-B (PEIR Volume IV)**. The matters raised have been reviewed and are being taken into consideration in the relevant technical assessments as described in **Chapters 7 to 24 (PEIR Volume II)**. Further details on the EIA Scoping Opinion are set out in **Chapter 2: Assessment Methodology and Consultation (PEIR Volume II)**.

The Preliminary Environmental Information Report

- 1.6.7 PEI is defined in the EIA Regulations as:
- 'information referred to in Regulation 14(2) which
 - (a) has been compiled by the applicant; and
 - (b) is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development).'
- 1.6.8 Following completion of an EIA Scoping Report and publication of SoS's Scoping Opinion, the EIA for a DCO is reported in two stages:
- a PEIR is prepared to inform consultation with the public and other stakeholders about the Proposed Development, based on the preliminary

environmental information available at the time of consultation; and subsequently

- an ES is prepared to accompany the Application.

1.6.9 This document is the PEIR which has been prepared to satisfy the requirements of Regulation 12(2) of the EIA Regulations. In accordance with Regulation 12(2)(b), the PEIR presents “the information referred to in Regulation 14(2) which... is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development).” Regulation 14(2) describes the requirements of an ES.

1.6.10 **Table 1-1** identifies where information defined by Regulation 14(2) can be found within this PEIR.

Table 1-1: Location of information required by Regulation 14(2) within this PEIR

Specified information	Location within PEIR
a) A description of the proposed development comprising information on the site, design, size and other relevant features of the development.	Chapter 3: Description of the Existing Environment; Chapter 4: The Proposed Development; Chapter 5: Construction Programme and Management; and Chapter 6: Project Alternatives of PEIR Volume II and supporting figures and appendices to these chapters in Volumes III and IV.
b) A description of the likely significant effects of the proposed development on the environment.	Volume II Chapters 8 to 23 , 'Preliminary Assessment of Likely Impacts and Effects' sections.
c) A description of any features of the proposed development, or measures envisaged in order to avoid, prevent, or reduce and, if possible, offset likely significant adverse effects on the environment.	Volume II Chapter 4: The Proposed Development and Chapters 8 to 23 'Development Design and Embedded Mitigation and 'Additional Mitigation and Enhancement Measures' sections.
d) a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment.	Volume II Chapter 6: Project Alternatives.
e) A non-technical summary of the information referred to in subparagraphs (a) to (d)	Volume I Non-Technical Summary (NTS)
f) Any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affects.	Baseline conditions relevant to each assessment are described in Volume II Chapters 8 to 23 , 'Baseline Conditions' sections. Assessment methods are described in Volume II Chapter 2: Assessment Methodology and Consultation and Chapters 8 to 23 , 'Assessment Methodology' and 'Preliminary

Specified information	Location within PEIR
	<p>Assessment of Likely Impacts and Effects' sections</p> <p>Any limitations and/ or difficulties with the assessments are described in in Volume II Chapters 8 to 23, 'Assessment Assumptions and Limitations' sections.</p> <p>Volume IV Appendix 6-A: Legislative and Policy Framework provides the prevailing policy framework for this PEIR</p>

- 1.6.11 PINS Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements (Ref 1-5) paragraph 8.4 states 'A good PEI document is one that enables consultees (both specialist and non-specialist) to understand the likely environmental effects of the Proposed Development and helps to inform their consultation responses on the Proposed Development during the pre-application stage.'
- 1.6.12 In order to enable consultees to understand the likely environmental effects of the Proposed Development, this PEIR presents preliminary findings of environmental assessments undertaken to date. This allows consultees the opportunity to provide informed comment on the Proposed Development, the assessment process and preliminary findings prior to the finalisation of the DCO Application and the ES. The Applicant is seeking the views of consultees on the information contained within this report, and there is opportunity within the process up to submission of the DCO Application for both the EIA and the project design to have regard to comments received.
- 1.6.13 It should be noted that this PEIR does not constitute a full ES, but rather presents the findings of the EIA process to date. The information presented in the PEIR describes the current extent of the environmental assessment work undertaken, based upon the information available. It is considered that the PEIR presents sufficient preliminary environmental information to enable consultees to develop an informed view of the Proposed Development.
- 1.6.14 Following statutory consultation on the preliminary environmental information, this PEIR will be developed into a final ES taking into consideration comments raised during the consultation. The ES will be submitted as part of the suite of DCO Application documents.

1.7 Structure of this Preliminary Environmental Information Report

- 1.7.1 The structure of this PEIR reflects the proposed format of the final ES and covers the assessment topics agreed through the EIA Scoping process.
- 1.7.2 **Volume I** is the Non-Technical Summary (NTS) – The NTS document provides a concise summary of the PEIR.
- 1.7.3 **Volume II** forms the main body of the PEIR and is structured as follows:
- **Chapters 1 and 2** – an introduction to the PEIR and approach to the EIA, including consultation;

- **Chapters 3 to 6** – a description of the Site, Surroundings and Proposed Development, including information available at the time of writing on likely construction methods, timescales and alternatives;
- **Chapter 7** – an overview of the legislation, planning and other policy relevant to the Proposed Development and the PEIR;
- **Chapters 8 to 23** – preliminary assessments of the likely significant effects of the Proposed Development in relation to the environmental topics scoped into the EIA; and
- **Chapter 24** – preliminary assessment of potential inter-relationships between the topics covered in **Chapters 8 to 22** (combined effects), and between the Proposed Development and other planned developments in the surrounding area (cumulative effects).

1.7.4 **Volume III: Figures** – A set of figures is provided to accompany **Volume II** to aid readers understanding.

1.7.5 **Volume IV: Technical Appendices** – these provide supporting information relating to the ongoing environmental studies of the EIA, including relevant data tables, figures and photographs to support the preliminary assessments in **Volume II**.

1.8 Statement of Competence

1.8.1 AECOM has been awarded the EIA Quality Mark from the Institute of Environmental Management and Assessment (IEMA), demonstrating competency in ES preparation.



1.8.2 As required under Regulation 14(4)(b) of the EIA regulations, an ES must be accompanied by a statement outlining the relevant expertise or qualifications of those involved in its preparation. A statement of competence of the EIA coordinators and the technical specialists that have provided expert input the PEIR is included as **Appendix 1-C (PEIR Volume IV)**.

References

- Ref 1-1 PINS, 2023; HyNet Carbon Dioxide Pipeline [online]. Available at: <https://infrastructure.planninginspectorate.gov.uk/projects/Wales/HyNet-Carbon-Dioxide-Pipeline/> (Accessed 22/03/2024)
- Ref 1-2 HMSO (2008). Planning Act 2008. Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents>
- Ref 1-3 The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (SI 2009/2264). London: HMSO. Available at: <https://www.legislation.gov.uk/uksi/2009/2264/made>
- Ref 1-4 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (SI 2017/572). London: HMSO. Available at: <https://www.legislation.gov.uk/uksi/2017/572/contents/made>
- Ref 1-5 Planning Inspectorate (2020) Planning Inspectorate Advice Note Seven (Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping). Version 7 June 2020. Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/>
- Ref 1-6 The London School of Economics and Political Science (2023) What is carbon capture, usage and storage (CCUS) and what role can it play in tackling climate change?. Available at: <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-carbon-capture-and-storage-and-what-role-can-it-play-in-tackling-climate-change/> (Accessed 09/04/2024)

